PACIFIC SEABIRD GROUP

BULLETIN

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PACIFIC SEABIRD GROUP BULLETIN

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Cover drawing by Helen Coxhead Strong

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All correspondence concerning the Bulletin should be sent to the Secretary.

PACIFIC SEABIRD GROUP

Formation and Goals

The Pacific Seabird Group was formed by the participants in a seabird symposium held in Arcata, California at the December 1972 meeting of the Western Society of Naturalists. As a result of that meeting, questionnaires were mailed in March 1973 to persons known to have an interest in Pacific seabirds. Announcements of the Group's formation were placed in ornithological journals and other publications. To date 215 questionnaires have been mailed and 145 have been returned. The list of respondents and their areas of interest are presented in the membership list at the back of this Bulletin.

Respondents were asked to identify and rank the importance of certain activities that the PSG should undertake. The responses were used by the interim Executive Council in formulating the Group's goals and activities. Persons were asked to assign each activity a priority number; "1" to all activities of the highest priority to "5" to those of the lowest priority, and crossing off all inappropriate activties. Most respondents used only three categories: 1, 2, and rejected. On a number of questionnaires this section was incomplete. The results of the survey are:

Activity	Rank of Importance					
	1	2	3	4	5	Rejected
Census and catalog breeding colonies	117	9	1	1	0	0
Conduct beached bird surveys	35	62	14	5	3	2
Study biology and life histories of certain seabird species	84	26	10	2	0	0
Collect specimens for pollutant analysis	44	55	9	4	2	4
Rehabilitation of oiled seabirds	5	44	12	5	5	45
Promote the use of uniform and effective census techniques	92	20	2	0	0	1
Conduct a banding program	22	57	12	2	2	13

Activity	Rank of Importance 1	2	3	4	5	Rejected
Act as a clearinghouse for informing members of opportunities to conduct research	74	40	4	1	0	3
Provide advisory and consultative services to government and industry	59	45	10	1	1	2
Work for conservation causes pertaining to the marine environment	73	36	10	2	0	5
Compile a bibliography on seabirds of the Pacific Basin	56	50	15	1	0	3
Publish a newsletter	71	34	9	5	0	4
Publish a journal	16	16	15	10	0	40

In the fall of 1973 an interim Executive Council was formed; and it met on December 1 and 2 at Point Reyes Bird Observatory in Bolinas, California. The council consists of the following members: J. Michael Scott, Chairman; Spencer G. Sealy, Vice-Chairman; George J. Divoky, Secretary and Treasurer; David G. Ainley; Daniel W. Anderson; C. Eugene Knoder; David A. Manuwal; M. T. Myres; Gerald A. Sanger; and M. D. F. Udvardy. The following goals and activities are the results of that meeting. The Executive Council invites comments on the activities it has proposed for the Group. Copies of the organization's bylaws may be obtained from the Secretary.

General Goals

The Pacific Seabird Group's primary function is to increase the flow of information among persons interested in Pacific seabirds. The Group has defined "seabird" as a bird that utilizes the marine environment during some part of its life cycle. The Group will provide coordination and stimulation of the field activities of its members rather than initiating any field programs of its own. For the time being, at least, the Group will be primarily concerned with the west coast of North America and adjacent areas of the Pacific. It is hoped, however, that seabird workers in other parts of the Pacific and the world will join and participate in the Group.

Though coordination of field activities will be the

Group's primary goal, conservation issues will also be dealt with. The Group will inform members of conservation issues relating to seabirds and will issue policy statements on conservation issues of major importance.

Organization

Executive Council and Officers

The Group will be headed by an Executive Council consisting of 10 regional representatives. Alaska, British Columbia, Washington, Oregon, northern California (north of Point Conception), southern California (south of Point Conception), Mexico, and Hawaii will each have one seat on the council. The remaining two seats will be occupied by a Canadian and a U. S. member not residing on the Pacific coast. The Executive Council will meet annually and will initiate and coordinate the activities of the Group. They will also issue policy statements on conservation issues. All interested persons are invited to attend the council meetings. Notice of the meetings will be published in the PSG Bulletin.

Four offices will be filled by members of the Executive Council. A Chairman, Vice-Chairman, Secretary and Treasurer will be elected by the council and will have terms of one year. The Chairman will direct the activities of the Group and act as official spokesman. The Vice-Chairman will aid the Chairman in his duties and serve in his absence. The Secretary will be in charge of the Group's publications. Until the time when dues are collected, the offices of Secretary and Treasurer will be held by the same person.

Duties of Council Members

Council members from regions on the Pacific will report research and conservation issues in their region for inclusion in the PSG Bulletin. They will also establish and maintain liaison between PSG and local conservation groups and appropriate state and federal agencies. Council members will serve as depositaries for data on beached bird surveys, colony censuses, and pelagic observations being conducted in their region that are not being published by the investigator.

Terms and Selection of Council Members

Seats on the Executive Council will normally have terms of two calendar years. Successive terms may be served. Alaska, Washington, Northern California, Mexico, and Hawaii

will have their terms begin in odd-numbered years. British Columbia, Oregon, southern California, and the two non-pacific seats will have their terms begin in even-numbered years. To initiate this arrangement, the initial terms of the latter group will last for only one year.

All council seats are up for election for 1975. Representatives must live in the region they represent and they will be elected by PSG members in their region. Anyone wanting to nominate someone or volunteer for a seat on the council should contact the Chairman of Election Committee, David G. Ainley, Point Reyes Bird Observatory, Box 321, Bolinas, CA 94924 by June 1, 1974. He will then mail ballots to PSG members, listing the candidates for their region. The Executive Council for 1975 will be announced in the next issue of the PSG Bulletin.

Corresponding Members

Countries on the Pacific not having a representative on the council will have two persons chosen by the Executive Council to be Corresponding Members. In addition, Corresponding Memberships will also be offered to prominent seabird biologists in countries away from the Pacific. Corresponding Members will be asked to report, when the situation warrants, on seabird research and conservation issued in their countries.

Membership and Finances

For the current year no membership dues will be solicited and the Group's membership will be composed of those persons who have expressed an interest in the Group. Membership dues will be solicited in 1975. Operating expenses for the current year are being paid with a grant for $500.00 from the National Audubon Society. The PSG wishes to express its appreciation to the National Audubon Society for this generous contribution.

Activities

The PSG feels that it can make a major contribution to the coordination of field studies in three areas: colony censusing; beached bird surveys and seabird disasters; and pelagic observations and sea-watches. A working committee has been established in each of these areas to develop uniform field techniques and reporting forms. All PSG members with experience in any of these areas are urged to contact the appropriate working committee coordinator. When standardized procedures and reporting forms have been developed

they will be published and distributed by the PSG.

The other major activities of the Group will be involvement in conservation issues and the publishing of the PSG Bulletin.

Colony Censusing

The Working Committee on Colony Censusing is composed of David A. Manuwal, Coordinator; Daniel W. Anderson; C. Eugene Knoder; David N. Nettleship and Spencer G. Sealy. This committee will develop techniques for censusing breeding populations of seabird species on the west coast of North America. The techniques will take into account the breeding habits and habitats of each species. The adoption of standardized procedures will allow more accurate determination of changes in populations at individual colonies and over the range of a species.

A long-range plan for colony censusing will also be developed. This plan will present a systematic censusing scheme for the west coast of North America from northern Alaska to the southern end of Baja California, including the Gulf of California. Agencies and groups involved with colony censusing will be urged to coordinate their efforts in the following ways: (1) the entire coastline should be censused on a regular basis and census efforts should be coordinated so that much of the work for the entire coast is done within a 1- or 2-year period, (2) certain colonies in each region should be censused annually. Only with this type of joint effort can widespread decreases and increases in populations be discovered.

Persons conducting colony censuses which they do not intend to publish are asked to deposit their results with the regional representative so the data will be available to others.

Beached Bird Surveys and Disasters

The Working Committee on Beached Bird Surveys and Disasters is composed of David G. Ainley, Coordinator; Daniel W. Anderson; R. Wayne Campbell; C. Eugene Knoder; and David A. Manuwal.

While beached bird surveys were not an activity that most respondents considered of major importance the Executive Council felt that the Group should be involved in such studies. Beach bird surveys provide information on natural mortality and allow the effects of increased oil drilling and shipping operations offshore to be assessed. Anyone who regularly walks a stretch of beach can contribute

to this type of study. In addition to developing standard procedures and forms the working committee will act to increase communication among persons conducting beached bird surveys so that a faster correlation of results is possible.

"Seabird disasters" refer to any mass mortality of seabirds due to either natural or human-related causes. When a large seabird mortality is discovered it is important that accurate information be gathered on the size, species composition and cause of the die-off. The working committee will compile a list of instructions on what type of data to gather and who to contact in the event of a mass mortality. Until a procedure is developed it is important that the PSG have a method of coordinating the investigations of its members to assure that adequate data are gathered.

The list below gives the names and phone numbers of persons to be contacted in the event of a seabird disaster in their region. These persons will then inform other PSG members of the disaster. All persons wanting to be informed of seabird disasters should place their names, addresses and phone numbers with the appropriate person on the following list.

Alaska - George J. Divoky - 907-452-3206
British Columbia - R. Wayne Campbell - 604-387-6929
Washington
  Olympic coast - Rex Van Wormer - 206-484-3482
  Puget Sound south of the San Juan Islands - David A. Manuwal - 206-543-2740
  Puget Sound north of the San Juan Islands - Terence Wahl - 206-733-8255
Oregon - J. Michael Scott - 503-754-1531
Northern California - David G. Ainley - 415-868-0519
Southern California - Charles T. Collins and Stuart L. Warter - 213-498-4813

In addition to informing the PSG of a mass mortality the following should also be done: (1) when rehabilitation of oiled seabirds seems possible, contact the International Bird Rescue Research Center, 2701 Eighth St., Berkeley, CA 94716; telephone 415-841-9086; (2) to assure that information on the event is quickly disseminated, contact the Smithsonian Institution, Center for Short-lived Phenomena, 60 Garden St., Cambridge, MA 02138; telephone 617-864-7911.

Beached birds provide a means of obtaining specimens for museum collections that does not require the killing of healthy birds. Museums wanting skeletal or other types of specimens should contact persons conducting beached bird surveys and those persons listed above so that potential museum specimens are not wasted. Members should be cautioned that both state and federal collecting permits are required to possess and transport specimens.

Pelagic Observations and Sea-watches

The Working Committee on Pelagic Observations (observations conducted at sea) and Sea-watches (observations of seabirds conducted from land) is composed of Gerald A. Sanger, Coordinator; R. G. B. Brown; George J. Divoky; Warren B. King; M. T. Myres; and J. Michael Scott.

The development of standard methods and recording forms will be done with the cooperation of other groups that have been working in this area. The Australian and British Seabird Groups and PIROP (a pelagic censusing program on the east coast of Canada) will be consulted so that PSG's methods will provide results that can be compared to observations from other areas.

An attempt will also be made to coordinate the local pelagic trips conducted by local Audubon Societies and other groups. The persons in charge of these trips will be asked to schedule their cruises so that they provide synoptic information.

The PSG will also try to increase the number of oceanographic cruises on which pelagic bird observations are made. Persons wishing to participate in oceanographic cruises should obtain a copy of the Oceanographic Ship Operating Schedule from the Office of the Oceanographer of the Navy, 200 Stovall St., Alexandria, VA 22332. This publication is issued periodically and contains a listing of planned cruises for oceanographic vessels in the U. S., indicating which have space available for visiting scientists.

Persons making pelagic observations and sea-watches that they do not intend to publish are asked to deposit their results with the PSG regional representative so the data will be available to others.

Seabird Conservation and Policy Statements

One of the major roles of the PSG will be to inform members of and act upon conservation issues relating to seabirds. Conservation notes will be regularly reported in the regional reports and more detailed articles will also be presented in the Bulletin. When an issue is of major importance the PSG will issue a policy statement. Policy statements are intended to inform organizations and individuals of critical situations involving seabird conservation and will present the PSG's recommendations for dealing with the problem.

The consideration of an issue for a policy statement will be initiated by a member contacting the Chairman or

another member of the Executive Council. The Chairman will then contact PSG members with expertise in the area under consideration. These members will then draft a policy statement and submit it to the Executive Council for approval. When an issue is known to be highly controversial, with the membership holding widely divergent opinions, the views of the members will be solicited. As a matter of policy the PSG will not take a position on a specific legislative bill, but will express its views on the principles involved in the proposed legislation. Upon approval by a majority of the council, the statement will be sent to appropriate organizations and individuals. All policy statements will be published in the PSG Bulletin.

The PSG will also review environmental impact statements that relate to the marine environment. The Secretary will receive the listing of impact statements issued by the Council on Environmental Quality. PSG members will be asked to review the impact statements that pertain to their area of expertise. The Chairman will then incorporate the member's comments in a letter to the agency issuing the statement.

In addition to the above conservation activities, the PSG is asking the American Ornithologist's Union to have a PSG representative on the AOU's Conservation Committee.

Pacific Seabird Group Bulletin

At least for the current year, the PSG Bulletin will be issued in January and September. The Bulletin will contain reports of research and conservation from each of the regional representatives. Seabird news from other areas of the Pacific and the world will be included on an irregular basis. The Bulletin will contain reports by working committees, policy statements, and news of the PSG activities. A section of letters to the Executive Council will be included when letters deserving wider circulation are received. A recent literature section will contain reviews of seabird publications that are not widely circulated in North America. A "Bulletin Board" section will contain notices of opportunities to conduct research, members seeking research opportunities, and requests for information or specimens. The Bulletin will publish articles on seabird conservation and research, but members are encouraged to publish the results of their studies in existing journals. Articles submitted for publication in the PSG Bulletin should be of a nature not suitable for publication in these journals.

Meetings

All PSG members are invited to attend the annual Executive

Council meeting. The dates and location of this year's meeting will be announced in the September Bulletin. Plans are currently being made for a meeting of the general membership in 1975.

Other Activities

A number of activities were considered inappropriate for the PSG. Life history studies, pollutant analysis, and banding were not believed to require the degree of coordination of those activities discussed above. No effort will be made to rehabilitate oiled seabirds because of the low survival rates of such activities and since the Group should channel its efforts to preventing oiling incidents. No bibliography will be compiled since there are currently adequate sources for those conducting a literature search. While the PSG will not participate in these activities, it will have an interest in them. Members wanting to publish news of any seabird activity are welcome to submit it for inclusion in the Bulletin.

REGIONAL REPORTS

The following reports contain a listing of current or recently completed research on seabirds in each region. Current conservation issues are also included. Persons knowing of additional research projects should contact the appropriate regional representative. This list will be updated in future issues of the Bulletin.

Alaska

Current Research

Andrews University (Dept. of Biology, Berrien Springs, MI 49104)

Gulls as hazards to aircraft. Glaucous-winged Gulls are being studied on Shemya Island, Aleutian Islands. Research includes studies on gull communication and reproductive behavior.
Principal Investigator: W. H. Gillett.

U. S. Bureau of Land Management (Alaska Outer Continental Shelf Office, P. O. Box 1159, Anchorage, AK 99510)

Examinations and assessment of the bird and mammal populations of the outer continental shelf. Environmental impacts that could result from the development of Alaska's offshore petroleum deposits are currently being assessed.
Principal Investigator: Kent Wohl.

Purdue University (Dept. of Forestry and Conservation, Lafayette, IN 47907)

Ecology and behavior of the Glaucous Gull. Field work is being conducted in western Alaska and includes observations on feeding, social behavior, and the effects of gull predation on waterfowl.
Principal Investigator: Carl A. Strang.

U. S. Fish and Wildlife Service (Aleutian Islands National Wildlife Refuge, Box 5251, Adak AK 98791)

1. Beach survey. Three one mile lengths of Bering Sea beach at Adak Island are walked by two observers. All dead animals, primarily seabirds and sea otters, are recorded.
2. Catalog of seabird colonies on the Aleutian Islands National Wildlife Refuge. A large portion of the refuge has been surveyed. Upon completion of the basic survey, certain stations will be monitored regularly to obtain information on changes in populations.
3. Avifauna of Adak Island. Program includes a weekly count of all waterfowl and seabirds in Clam Lagoon and Sweeper Cove and daily observations during periods of migration.

4. Avifauna of Bogoslof Island. Quantitative assessment of seabirds breeding on a recently active volcano.
   Principal Investigator: G. Vernon Byrd.

U. S. Fish and Wildlife Service (Clarence Rhode National Wildlife Range, Box 346, Bethel, AK 99559
   Breeding biology and behavior of the Pelagic Cormorant.
   Principal Investigator: Matthew Dick (Museum, University of Alaska, Fairbanks, AK 99701)

U. S. Fish and Wildlife Service (Box 1287, Juneau, AK 99801)
   Seabirds of Bristol Bay. Recently completed study utilizing aerial and at-sea observations.
   Principal Investigator: Donald Montgomery.

U. S. Fish and Wildlife Service (1412 Airport Way, Fairbanks, AK 99701)
1. Catalog of Alaskan seabird colonies:
   Principal Investigators: James C. Bartonek and George J. Divoky.
2. Birds of the Bering Sea pack ice.
   Principal Investigator: George J. Divoky.

U. S. Fish and Wildlife Service (813 D St., Anchorage, AK 99501)
   Seabirds of Prince William Sound and the Gulf of Alaska. Aerial and boat censuses are being used to determine size of populations.
   Principal Investigators: LeRoy Sowl and J. Larry Haddock.

University of Alaska (Cooperative Wildlife Research Unit, Fairbanks, AK 99701)
   Kittiwake breeding ecology. Field work conducted on Chisik Island, Tuxedni National Wildlife Refuge. Study completed but not published.
   Principal Investigator: David Snarski.

University of California, Berkeley (Museum of Vertebrate Zoology, 2593 Life Sciences Bldg., Berkeley, CA 94720)
   Avifaunal review for the Barrow region and the north slope of Alaska. To be published in Arctic and Alpine Research.
   Principal Investigator: Frank A. Pitelka.

University of Manitoba (Dept. of Zoology, Winnipeg, Manitoba)
1. Breeding biology of Least and Crested Auklets on St. Lawrence Island.
2. Plumages and molts of Parakeet, Crested and Least Auklets.
   Principal Investigators: Spencer G. Sealy and Jean Bedard (Universite Laval, Quebec.)

University of Washington (College of Forest Resources, Seattle, WA 98195)

1. Sympatry and interbreeding of Herring and Glaucous-winged Gulls in southeastern Alaska.
2. Breeding ecology of colonial seabirds in Glacier Bay National Monument.
   Principal Investigator: Samuel M. Patten, Jr.

Independent Studies

Birds of the northern Gulf of Alaska and Prince William Sound region. Observations are made throughout the year, primarily in the course of commercial fishing activities. A review of observations coauthored with Brina Kessel will be published by the University of Alaska.
Principal Investigator: Pete Isleib, Box 424, Cordova, AK 99574.

Conservation notes

Department of the Interior seeks protection for certain Alaska seabird colonies. Rogers C. B. Morton, Secretary of the Interior, recommended to Congress that 83.3 million acres of Alaska be designated as National Wildlife Refuges, Parks, Forest and Wild and Scenic Rivers under provisions of the Alaska Native Claims Settlement ACT (ANCSA). Included among his recommendations were 65,756 acres of public lands to be designated as Alaska Coastal National Wildlife Refuges for the primary purpose of protecting the breeding areas of an estimated 4 million seabirds and the hauling grounds of many marine mammals. This proposal would create three new refuges (Barren Islands, Shumagin Islands, and Chukchi Sea) and add to two existing refuges (Bering Sea and Kodiak). Other seabird colonies on the Alaska, Seward and Kenai Peninsulas are within proposed units of the National Park System. The colonies recommended for inclusion within the Refuge and Park Systems include over 1,800 land areas consisting of islands, rocks, pinnacles, and headlands distributed along 1,500 miles of coastline from Cape Lisburne on the Chukchi Sea to the Kenai Peninsula on the Gulf of Alaska. The coastal water, from 3 to 5 miles offshore depending upon the specific proposal, is to be included within the units.

Following selection of Federal lands by Natives and the State as provided by ANCSA and the Alaska Statehood Act, respectively, additional acres of importance to seabirds may become eligible for inclusion within the refuge system. However, some immense colonies, such as those on St. Lawrence will come into private ownership of Native village and regional corporations.

The Alaska Coastal National Wildlife Refuges are perhaps the least controversial of the 28 proposals submitted to Congress; however, they, along with all of the other single-use or dominant-use proposals are running into stiff opposition from developers and exploiters of the State's natural resources.

The PSG was provided a copy of the Alaska Coastal Refuges proposal for review and comment, with the review period closing on February 20, 1974. Copies of this and the 27 other proposals can be found in the regional offices of the Bureau of Sport Fisheries and Wildlife and the National Park Service and the libraries of many state universities.

Regional representative for Alaska - George J. Divoky.

British Columbia

Current Research

British Columbia Provincial Museum (Victoria, B. C.)

1. Inventory and cataloging of seabirds on the coast of British Columbia.
2. Censusing of seabird colonies in the Strait of Georgia and central and northern tip of Vancouver Island. To be accomplished in 1974.
3. Banding of Glaucous-winged Gulls. It is hoped that age-class dispersal can be determined.
4. Brandt's Cormorant breeding inventory. Completed in 1973.
5. The collation of weathership seabird observations.
6. Pelagic field trips. Trips are being organized for spring and fall, 1974.
   Principal Investigators: C. J. Guiguet, R. W. Campbell, and R. Y. Edwards.

Canadian Wildlife Service (Vivarium Building., University of British Columbia, Vancouver, B.C.)

Studies of the effects of pesticides and oil pollution on pelagic birds.
Principal Investigator: Eoin H. McEwan.

Canadian Wildlife Service (110-10025 Jasper Ave., Edmonton, Alberta)

Inventory of seabird colonies on the coast of British Columbia.
Principal Investigators: Kees Vermeer and K. R. Summers.

University of Calgary (Dept. of Biology, Calgary, Alberta)

1. Seabirds at Ocean Station "Papa". The station is located 850 miles west of Victoria, B. C. Daily observations have been made since 1958.
2. Problems of seabird distributional ecology in relation to the oceanography of the northernmost North Pacific Ocean. Paper to be presented at the International Ornithological Congress in Canberra, Australia in August, 1974.

   Principal Investigator for above studies: M. T. Myres.
3. Behavioral ecology of coastal Peregrine Falcons on Langara Island, Queen Charlotte Islands. 1970 M.S. thesis on this project includes a section on the pesticide residues of the Peregrine's major prey species, the Ancient Murrelet. Work is being conducted for a Ph.D.

   Principal Investigator: R. W. Nelson.

University of British Columbia (Dept. of Zoology, Vancouver, B.C.)

1. Growth and survival of the Rhinoceros Auklet on Cleland Island. 1970 B.S. thesis.

   Principal Investigator: K. R. Summers.
2. The influence of brood-size on reproductive success in two species of cormorant, Phalacrocorax auritus and P. pelagicus, and its relation to the problem of clutch size. 1971 M.S. thesis.

   Principal Investigator: Ian Robertson.
3. Control and organization of parental feeding and its relationship to the food supply for the Glaucous-winged Gull. 1972 M.S. thesis.

   Principal Investigator: B. A. Henderson.
4. Bioenergetics of growth in the Pigeon Guillemot. 1972 M.S. thesis.

   Principal Investigator: A. F. Koelink.
5. Foraging strategy of the Black Oystercatcher. 1973 Ph.D. thesis.

   Principal Investigator: E. B. Hartwick.
6. Reproductive success, food supply, and the evolution of clutch size in the Glaucous-winged Gull. 1973 Ph.D. thesis

   Principal Investigator: J. G. Ward.

University of Manitoba (Dept. of Zoology, Winnipeg, Manitoba)

1. Feeding ecology of the Ancient and Marbled Murrelet near Langara Island.
2. Comparative breeding ecology of the Ancient and Marbled Murrelet near Langara Island.
3. Clutch size and breeding phenology of the Marbled Murrelet.

   Principal Investigator for above studies: Spencer G. Sealy.

4. Occurrences and status of the Horned Puffin in British Columbia.
5. Status of some breeding seabirds on Langara Island.
Principal Investigators for above two studies: Spencer G. Sealy and R. W. Nelson (University of Calgary, Calgary, Alberta).

Regional representative for British Columbia - Spencer G. Sealy.

Washington

Current Research

U. S. Fish and Wildlife Service (Willapa Bay National Wildlife Refuge, Illwaco, WA 98624.)
1. Catalog of seabird colonies of Washington.
Work on the catalog is being intensified with the assistance of David A. Manuwal and his graduate students at the University of Washington. Accurate population estimates are now available for the San Juan Islands and nearly all the coastal islands of Washington. Additional data is needed for the nocturnal alcids and storm-petrels. This data should be obtained in 1974.
2. Beached bird surveys.
3. Biology of selected seabird species.
Principal Investigator: Rex Van Wormer.

University of Puget Sound (Dept. of Biology, Tacoma, WA 98416)
Biology of an endangered population of Caspian Tern in Grays Harbor.
Principal Investigator: Gordon Alcorn.

University of Washington (College of Forest Resources, Seattle, WA 98195)
1. Population ecology of Cassin's and Rhinoceros Auklets.
2. Catalog of seabird colonies of Washington. Work being conducted with Rex Van Wormer.
Principal Investigator for the above studies: David A. Manuwal.
3. Ecology and competitive relationships of the Black Oystercatcher on Destruction Island.
Principal Investigator: David Nysewander.
4. Ecology of the Rhinoceros Auklet.
Principal Investigator: Lora Leschner.
5. Ecology of the Tufted Puffin.
Principal Investigator: David Frazer.

Conservation Notes

Protection Island. The major conservation issue involving seabirds in Washington during 1973 was the commercial development of Protection Island. This 400-acre island provides breeding habitat for perhaps the largest known colony (17-20,000 birds) of the Rhinoceros Auklet in the eastern Pacific. Despite the accessibility of the island there has been only one published study on this population (Richardson, 1961, Condor 63:456-473).

Since 1968, a Seattle developer has subdivided the island for vacation homes and presently over 700 lots have been sold. However, only a few small buildings now exist on the island. It is unclear as to whether the auklet colony will persist with the increase in human use of the island. This will apparently depend on how much of the undeveloped portion of the island can be obtained and whether predators (dogs and cats) are successfully prevented from being introduced.

The preservation of this valuable colony may be possible since the Nature Conservancy and State of Washington have indicated an interest in purchasing the undeveloped portion of the island.

The following organizations are involved in the conservation of the Protection Island Rhinoceros Auklet population: State of Washington, Dept. of Ecology, Dept. of Natural Resources, and Dept. of Game; U. S. Fish and Wildlife Service; University of Washington; University of Puget Sound; Nature Conservancy; and several local amateur ornithologists and bird banders.

Oil transport and refineries in Puget Sound. When the trans-Alaska oil pipeline is completed, there will be a large increase in the amount of oil tanker traffic to oil refineries in Puget Sound. An effort is now being made by David A. Manuwal and studies to obtain relevant reproductive data on existing marine bird colonies and survey winter and migratory seabird populations in the Puget Sound area so that the impact of future oil catastrophies can be properly assessed.

Regional representative for Washington - David A. Manuwal.

Oregon

Current Research

Audubon Society (Corvallis, OR 97330)

Pelagic field trips. Trips are scheduled at least twice a year (spring and fall). For further information, contact Fred Zeillemaker, William L. Finley, National Wildlife Refuge, Route 2, Box 208, Corvallis, OR 97330.

Oregon State University (Corvallis OR 97331)

1. Taxonomic and behavioral aspects of interbreeding between Glaucous-winged and Western Gulls. Field work is being conducted on Destruction Island, Washington; Greater Chain Island, British Columbia; and Yaquina Head, Oregon.
   Principal Investigators: J. Michael Scott (Dept. of Fisheries and Wildlife) and John A. Wiens (Dept. of Zoology).
2. Beached Bird Surveys. Before November 1973, monthly surveys of beached birds were conducted over measured stretches of beaches north and south of Newport, Oregon. Work is currently being prepared for publication.
   Principal Investigator: Wayne Hoffman (Dept. of Zoology).
3. Resource allocation in Leach's and Fork-tailed Storm-Petrels. Studies are being conducted on Goat Island, Oregon and offshore to 375 km during the breeding season (May-August). Observations on distribution, abundance, and feeding habits of these two storm-petrels is being correlated with simultaneous sampling of neuston, sea surface temperature, and other oceanographic conditions.
   Principal Investigators: J. Michael Scott and William A. Pearcy (School of Oceanography).
4. Offshore distribution of marine birds, 0-80 km off Oregon, 1969-1972. Completed but unpublished.
   Principal Investigator: J. Michael Scott.

U. S. Fish and Wildlife Service (William Finley National Wildlife Refuge, Route 2, Box 208, Corvallis, OR 97330)

Annual aerial census of marine bird colonies in Oregon.
Principal Investigators: Dick Rodgers and Fred Zeillemaker.

Independent studies

Distribution and abundance of Oregon birds. Presently in preparation.
Principal Investigator: M. Ralph Browning (Bird and Mammal Laboratories, National Museum of Natural History, Washington, D. C. 20560).

Regional representative for Oregon - J. Michael Scott.

Northern California

Current Research

California Department of Fish and Game (1416 9th St., Sacramento, CA 95814)

1. Inventory of nesting birds on offshore rocks in California.
2. Cormorant nesting studies.
3. Brown Pelican inventory.
4. Pelagic bird inventories (program in early states).

Principal Investigator: Howard R. Leach.

California State University, Humboldt (Dept. of Biology, Arcata, CA 95521)

1. Studies on the biology of storm-petrels.
   Principal Investigator: Stanley W. Harris.
2. Taxonomy of the Yellow-footed Western Gull (*Larus occidentalis livens*) in the Gulf of California.
   Principal Investigator: Ron LeValley.
3. Distribution and occurrence of birds off extreme northern California.
   Principal Investigators: Stanley W. Harris and Ron LeValley.

California State University, Moss Landing Marine Laboratory (Moss Landing, CA 95039)

1. Taxonomy of fossil marine birds of central California.
2. Distribution and occurrence of marine birds in Monterey Bay.

Principal Investigators: G. V. Morejohn and students.

California State University, Sacramento (6000 J St., Sacramento, CA 95819)

1. Functional anatomy in marine birds.
2. Biology of alcids.

Principal Investigator: M. D. F. Udvardy.

California State University, San Jose (San Jose, CA 95514)

Circannual and circadian rhythms in marine birds on the Farallon Islands. Studies are being conducted in conjunction with the Point Reyes Bird Observatory.
Principal Investigator: L. R. Mewaldt.

Point Reyes Bird Observatory (Box 321, Bolinas, CA 94924)

1. Studies on the marine bird community on and near the Farallon Islands.
2. Beached bird survey of California.
3. Maintenance of Farallon Research Station for studies (by other workers) on marine birds and mammals.

Principal Investigators: David Ainley and staff.

U. S. Fish and Wildlife Service (California State University, Humboldt, Arcata, CA 95521)
Birds of coastal bays and estuaries.
Principal Investigator: Paul Springer.

University of California, Bodega Marine Laboratories (P. O. Box 247, Bodega Bay, CA 94923)
Studies on pollutants in marine ecosystems and their biological effects.
Principal Investigator: Robert W. Risebrough.

University of California, Santa Cruz (Santa Cruz, CA 95060)
1. Behavioral ecology of gulls.
Principal Investigators: R. Pierotti and K. Briggs
2. Studies on the biology of marine mammals.
Principal Investigator: K. W. Norris.

Conservation Notes

Deep Water Tanker Port. A deep water oil tanker port off the San Francisco Bay has been proposed. Transfer of oil to the shore should be confined to within San Francisco Bay so that (1) oil spills can be more easily contained and (2) oil spills will be in the public eye. Waters outside the Golden Gate are extremely rough and are rarely visited by the public. Even excluding the huge seabird colonies on the Farallons, 20 miles from the Golden Gate, the area off San Francisco Bay is very rich in marine birds and, of course, other marine organisms.

Regional representatives for northern California - David G. Ainley and M. D. F. Udvardy.

Southern California

Current Research

Audubon Society Various coastal chapters.
Pelagic field trips. Local chapters should be contacted for details.

California Department of Fish and Game (see northern California report)

California Field Ornithologists (P. O. Box 369, Del Mar, CA 92014)
Pelagic field trips. Supervised pelagic tours are organized several times a year from various California ports. Interested parties should contact Clifford R. Lyons, the organization's treasurer.

California State University, Long Beach (Dept. of Biology, Long Beach, CA 90840)

1. Status and breeding biology of the California Least Tern.
2. Ecology of shorebirds and estuarine species.
3. Short-range seabird surveys in the Channel Islands and inshore areas of southern California.

Principal Investigators: Charles T. Collins and Stuart L. Warter.

San Diego Natural History Museum (P. O. Box 1390, Balboa Park, San Diego, CA 92112)

1. Surveys of seabirds off the Pacific Coasts of South and North America.
2. Taxonomy of murrelets.
3. Taxonomy of oystercatchers.
4. Supervised pelagic tours to Baja California Islands. (This program is being phased out)

Principal Investigator: Joseph R. Jehl, Jr.

Scripps Institute of Oceanography (Physiological Research Laboratory, La Jolla, CA 92037)

1. Physiology and behavior of penguins.
2. Behavioral aspects of diving.
3. Pelagic observations. Various biological-oceanographic expeditions are conducted throughout the year from ocean-going vessels.

Principal Investigator: G. L. Kooyman.

U. S. Fish and Wildlife Service (P. O. Box C, Davis, CA 95616)

1. Population ecology of seabirds.
2. Effects of oceanic pollution in the Gulf of California and off the California coast. Species studied in these two projects: Brown Pelican, Western Gull, Osprey, cormorants, Craveri's Murrelet, herons, and others.

Principal Investigator: Daniel W. Anderson.

University of California, Irvine (Dept. of Population and Environmental Biology, Irvine, CA 92664)

Temporal and spatial structure of seabird colonies and its significance to reproductive success. Species studied: Western Gull, Glaucous-winged Gull, Pelagic Cormorant, and Double-crested Cormorant.

Principal Investigator: George L. Hunt, Jr.

University of California, Los Angeles (Los Angeles, CA 90024)

A large program of research on seabirds covering the following areas: physiology, behavior, temperature regulation, olfaction, evolution, and ecology.

Principal Investigators: George A. Bartholomew,

Thomas R. Howell, Martin Cody (Dept. of Zoology); Jared Diamond, Fred N. White, Bernice N. Wenzel (Dept. of Physiology); Harmut Walters (Dept. of Geography).

Regional representative for southern California - Daniel W. Anderson.

Mexico

At present, we have no regional reporter for Mexico, but hopefully, by the time of our second issue, we will. Dr. Bernardo Villa has agreed to serve in this capacity, and as a member of our executive council. Therefore, reports of ongoing research in Mexico (including that by U. S. institutions), university programs, and conservation issues will be mostly reserved for later reports.

Conservation Issues

Baja California. Two conservation issues deserve mention now; both relate to the rapid development of the Baja California peninsula. First is the protection of seabird islands in the Gulf of California from increasing human disturbance, both by curiosity-seekers and educational cruises. This issue has been the subject of PSG's first policy statement (this Bulletin).

The second conservation issue involves seabird and marine mammal disturbances along the Baja California West Coast, again by curiosity-seekers, and especially by educational cruises. Both issues involve primarily disturbances to breeding birds and mammals on the islands offshore from the Baja California peninsula, but each is a separate problem in itself. The impending development of Baja California and the flooding of this area by U. S. tourists make these issues ones of immediate concern. This second conservation issue will be the subject of an upcoming PSG policy statement.

Temporary regional representative for Mexico - Daniel W. Anderson.

Hawaii

There is currently no regional representative from Hawaii. Anyone wishing to report on Hawaiian seabird activities for the second issue of the Bulletin should contact the Secretary.

Current Research

U. S. Fish and Wildlife Service (Mauna Loa Field Station, P. O. Box 35, Hawaii National Park, HI 96718)

The historical status and distribution of Newell's Manx Shearwater (Puffinus puffinus newelli) and the Hawaiian race of the Dark-rumped Petrel (Pterodroma Phaeopygia sandwichensis).
Principal Investigator: Winston Banko.

University of California, Los Angeles (Dept. of Zoology, Los Angeles, CA 90024)

Breeding biology, homing behavior and communication patterns of the Wedge-tailed Shearwater (Puffinus pacificus chlororhynchus). Recently completed dissertation.
Principal Investigator: Robert J. Shallenberger

Southern Illinois University (Dept. of Zoology, Carbondale, IL 62901)

1. Mortality and longevity in the Laysan Albatross. Based upon some 75,000 recaptures of birds banded as chicks. Manuscript in preparation.
   Principal Investigator: Harvey I. Fisher.
2. Factors influencing the age of first breeding in the Laysan Albatross.
   Principal Investigators: Harvey I. Fisher and Peggy VanRyzin.

Non-regional Studies

U. S. Fish and Wildlife Service (Patuxent Wildlife Research Center, Laurel, MD 20810)

Eggshell thinning studies. Pacific seabirds being considered include: Fork-tailed Storm-Petrel, Leach's Storm-Petrel, Common Murre, Thick-billed Murre, Black Guillemot, Pigeon Guillemot, Ancient Murrelet, Cassin's Auklet, Parakeet Auklet, Crested Auklet, Least Auklet, Whiskered Auklet, Rhinoceros Auklet, Horned Puffin, and Tufted Puffin.
Principal Investigators: Erwin E. Klaas and Harry M. Ohlendorf.

Smithsonian Institution (Washington, D. C. 20560)
Seabirds of the central and eastern Pacific Ocean. A collection of papers on the pelagic distributions of the Black-footed and Laysan Albatross, Wedge-tailed Shearwater, storm-petrels, Red-tailed Tropicbird, and Sooty Tern. To be published in 1974. Editor: Warren B. King.

PACIFIC SEABIRD GROUP POLICY STATEMENT

Seabird Conservation in the Gulf of California

Introduction

The Pacific Seabird Group is composed of scientists and others interested in the study and preservation of marine birds in waters of the Pacific Region. The group is an international organization with members from Canada, the United States, Mexico and other countries around the world. Statements such as this one reflect the professional opinions (based on direct observation) of the members and are intended to inform responsible agencies and individuals about critical situations involving seabirds and their conservation. In presenting this statement we hereby also offer our assistance in correcting the situation outlined below.

The Problem

The Gulf of California has in recent years been subjected to increased visits by fishermen, recreationists, and educational tours. The increases in numbers of people has resulted in increased disturbances of marine birds at their nesting colonies, resulting in decreased reproductive success.

In this particular situation, we first wish to commend those persons and agencies in Mexico who have made such a great success in protecting the seabird breeding colony at Isla Raza. In the following points we are suggesting that such protection be extended to other islands in the Gulf of California and that steps be taken to protect the extensive and unique marine bird populations there from decline in the face of development.

The Gulf of California has one of the most diverse and rich subtropical marine ecosystems in North America, and as yet it is relatively undisturbed; that is, the ecosystem is at present in a natural, healthy balance. The marine bird populations which play such an important part in maintaining this balance require for their breeding undisturbed islands similar to Isla Raza, which is already a protected sanctuary. The species of birds utilizing these islands are many (storm-petrels, Pelicans, Double-crested and Brandt's Cormorants, Brown and Blue-footed Boobies, Magnificant Frigatebirds, Ospreys, Yellow-footed Western and Heermann's Gulls, Elegant and Royal Terns, Red-billed Tropicbirds, murrelets, various ardeids, and others), and several are not known to breed outside of Baja California and the Gulf of California region.

In addition, some of the islands support large populations of sea lions, which interact with seabirds and need protection, as well. The fish-eating bat is almost entirely restricted to Gulf of California islands; and, large numbers of common dolphins, a considerable number of pilot whales and bottle-nosed dolphins, and a small but apparently resident finback whale population reside importantly in the Gulf of California--not to mention other important species such as the endemic Phocoena sinus.

During the fall and winter, many of the birds leave the Gulf of California and migrate to the north, while many others (including many gamebirds) migrate into the Gulf of California from the north. Thus, problems relating to marine bird populations in the Gulf of California are international in scope.

While the conservation of seabirds in the Gulf of California could be justified by many persons on aesthetic reasons alone, there are additional reasons for their protection. The maintenance of a healthy ecological balance in the Gulf of California benefits fishermen because it means that fish will be available for years and years to come. Fishermen watch the birds to determine where good fishing grounds are located. The birds help maintain rich fishing grounds by "fertilizing" areas with their guano. In addition, tourism is a growing industry especially in Baja California. Tourists are attracted to the region because it has good fishing, but most importantly, because the region is still UNSPOILED by tourists and heavy industries. Specifically, there are many thousands of persons in the United States and Canada who will probably visit the Gulf of California and Baja California in order to observe its birdlife. Increasing numbers of people from Mexico, as well, are flocking to the seashores and beaches in order to fish and to enjoy the abundant wildlife and solitude. Finally, seabirds are valuable indicators of oceanic pollution and overfishing--two conditions that as yet have not been demonstrated to seriously affect the Gulf of California.

Thus, the health of the Gulf of California and its marine life (including the seabirds) are of great importance to many people--particularly the Mexican people. However, the health of this region is becoming increasingly threatened as the result of an increase in tourism, educational cruises, boating, and human disturbance at and near to seabird breeding islands during the breeding seasons. In addition, in places there are poor attitudes among fishermen, American and Mexican, toward the seabirds that are so important to them, and there is little enforcement

of international conservation treaties. Some potentially threatening problems are as follows: increasing pollution by agricultural pesticides from adjacent areas; increasing numbers of tourists with a corresponding increase in tourist facility development on the seacoast (marinas for boats, etc.); overfishing due to an expansion of fleets and improved technology; oil pollution from a proposed deep-water port and pipeline at the head of the Gulf as well as oil pollution from vessel maintenance at sea. All of these factors have the potential to disrupt the healthy balance now present in the Gulf of California.

Recommendations

One aspect of the resources, the seabirds of the Gulf of California, can be protected through the following steps: 1) Establish all important seabird colonies as sanctuaries (similarly to Isla Raza) and make them off-limits to tourists and casual visitors (fishermen, too) during the breeding seasons (January through July each year). 2) Support George Lindsay's recommendations (Pacific Discovery, "Some Natural Values of Baja California", Volume 23, No. 2, 1970) on establishment of island sanctuaries in the Gulf of California for all fauna and flora; but add Islas San Lorenzo, San Lorenzo Norte (Animas), San Luis, Salsipuedes, Monserrate, and possibly others as time passes, and as other islands are shown to be threatened. 3) Establish a conservation patrol of the Gulf of California islands during the breeding seasons; and expand Raza policy. We suggest that the United States provide aid to the Mexican authorities to accomplish this, and encourage Mexican participation in seabird research. This should include the encouragement of qualified Mexican students to participate in studies for higher degrees in ecology, ornithology, and conservation at U. S. universities. 4) Tourist boaters should be informed at the border and at harbors of Mexican and international regulations and protection of local and migratory wildlife. A leaflet could be prepared (the Pacific Seabird Group offers aid in writing this up, as well as aiding in any other way) and distributed at the time boat papers are issued or checked. 5) The Mexican authorities should inform fishermen of the protection of seabirds and mammals, and their breeding grounds, as well as the values and benefits they might derive from them.

We feel it is justified, and not too late, to inaugurate these policies.

Statement prepared by: David G. Ainley, Daniel W. Anderson, C. Eugene Knoder, Robert T. Orr, Bernardo Villa-Ramírez, Robert W. Risebrough, and M. D. F. Udvardy.

ALASKA OIL AND SEABIRDS

Much of the controversy surrounding the trans-Alaska pipeline and accompanying marine transportation system concerned environmental risks. The decision by Congress to go ahead with the proposed system was made not so much because the risks were either discounted or minimized by improved technology, but because the need for oil was deemed so urgent. The construction permit was issued on January 23, 1974, and North Slope oil could be ready for shipment to West Coast and foreign ports by late 1977 or early 1978. At peak production more than 2 million barrels of oil per day will leave Port Valdez.

Unavoidable effects of the marine system that could have a profound effect upon seabirds and their marine environment include:

1. Discharges of effluents from tanker ballast treatment facilities into Port Valdez could range from 2.4 to 26 barrels of oil per day, provided the target level of 10 parts of oil per million parts of water is attained. Existing ballast treatment facilities have not yet attained this efficiency of extraction; and, therefore, it may not be achieved by the Valdez facility.

2. An indeterminate amount of oil will be discharged on the "open" sea during tank cleaning processes and bilge pumping.

3. Tanker casualties involving U. S. flag ships during preceding years suggests that this system could lose on the "average" an estimated 384 barrels of oil per day, or 140,000 barrels per year.

4. Oil spilled during transfer at Valdez and destination ports could average from 1.6 to 6.0 barrels per day.

Alyeska Pipeline Service Company forecasts that at peak production there will be 2.6 ships per day loading North Slope oil at Port Valdez and 0.2 ships per day unloading at Puget Sound, 1.1 ships at San Francisco, 0.9 ships at Los Angeles, and 0.9 ships per day passing through the Panama Canal. Legislation authorizing the construction of the pipeline also allowed the export of the North Slope oil to foreign countries, with Japan being the most likely importer.

The current energy "crisis" has produced a climate favorable for widespread oil exploration and development throughout Alaska, with the outer continental shelf and

recently acquired Native-owned and State-owned lands receiving attention by the industry. The State of Alaska in December 1973 leased 64 tracts of submerged lands for oil and gas development in Cook Inlet for $25 million. Future new oil fields and pipelines from Alaska, Canada, and Siberia will undoubtedly increase the volume of oil tanker traffic through the North Pacific Ocean and increase the attendant bird-oil problems.

RECENT LITERATURE

MARINE BIRDS AND THE BIOLOGICAL STRUCTURE OF THE OCEAN. V. P. Shuntov. 1972. TINRO, Vladivostok, U.S.S.R. 376 pages, 73 figs., 37 tables. (in Russian)

No English translation is currently available for this work though attempts are being made to have agencies in the U. S. and Canada initiate translations. A translation of the table of contents shows the book to be a major contribution to the literature on marine birds.

Chapter 1 is titled "Notes on the distribution and migrations of different species of marine birds". Species covered are the albatrosses of the North Pacific and the Southern Ocean, Giant Fulmar, Short-tailed and Sooty Shearwaters, Northern Fulmar, Black-legged Kittiwake, Common and Thick-billed Murres, and Tufted Puffin.

Chapter 2 is titled "Seasonal aspects of interfaunal distribution in different areas of the Indian and Pacific Ocean". Areas covered are the Bering Sea, Sea of Okhotsk, Sea of Japan, northern part of Pacific Ocean (north of 30^{o}N), East China Sea, tropical waters between northern Australia and the Sunda Islands, the southern Australia shelf and surrounding waters, and waters near New Zealand and surrounding Antarctic waters.

Chapter 3 is titled "General patterns in the distribution and migration of marine birds". Specific topics in this chapter are peculiarities of the seasonal migration of marine birds in various climatic zones of the Pacific, problems of the migration routes of marine birds, and the transoceanic migration of land birds.

Chapter 4 is titled "Ornithogeographical divisions of the world ocean". Specific items treated in this cahpter are the borders of the ornithogeographical regions of the Pacific and Indian oceans; the role of ornithogeographical regions in the scheme of biogeographic areas; guidelines in the geographical distribution of marine birds; the necessity of combining biogeograhic, ecogeographic, historical, and faunal data in order to understand an area; and the basis for delimiting ornithogeographic areas on a province level.

Chapter 5 is titled "Quantitative distribution of marine birds and the biological structure of the ocean". Subheadings are "Latitudinal zones and distributional symmetry of numerical population densities of marine birds" and "Quantities of marine birds and their role as predators on other animals."

BULLETIN BOARD

Positions Wanted

The PSG will publish requests for research opportunities and employment in areas of seabird research. Organizations having openings in volunteer or salaried positions are urged to contact the Secretary so that notice of these openings can be included in the Bulletin.

Peggy T. VanRyzin, Dept. of Zoology, Southern Illinois University, Carbondale, IL 92901. Will be receiving M.S. from Southern Illinois University in June 1974 for a thesis on the effects of age and experience of the mate on the age of breeding initiation in the Laysan Albatross. Interested in the biology and life histories of marine birds and factors affecting their longevity and mortality. Looking for a position doing field or laboratory work with marine birds. Available September 1974.

Jacqueline McEnroe, Hayfields, Sunset Trail, Clinton Corners, NY 12514. Received B.A. from Smith College in 1973. Studies on the ecology of swallows and growth rate and twinning experiments in Leach's Storm-Petrel. Looking for a research position or graduate opportunity to do research on the ecology and evolutionary biology of seabirds.

Request for Information

M. T. Myres (Dept. of Biology, University of Calgary, Calgary, Alberta) will be presenting a paper titled "Problems of seabird distributional ecology in relation to the oceanography of the northernmost North Pacific Ocean" at the XVI Ornithological Congress. Anyone who has not already been contacted is invited to send any information they have on this subject to Dr. Myres.

Request for Photographs

Hancock House Publishers is producing a book the Alcidae of the World by George Peck. The publication will be richly illustrated with color and black and white photographs of individual birds, general behavior, plumages, ecology, colonies, biologists studying and people harvesting.

Photographs or transparencies for possible purchase should be sent to Hancock House Publishers, 3215 Island View Rd., Saanichton, B.C. Unsuitable material will be returned by registered mail. Payment will be upon publication and all published materials will be returned to photographers after publication.

PACIFIC SEABIRD GROUP

MEMBERSHIP LIST

The following is a list of persons who have returned the PSG questionnaire as of January 31, 1974. The list includes the member's occupation and interests or studies relating to seabirds. Additions to this list will be included in future Bulletins.

David G. Ainley Point Reyes Bird Observatory Box 321 Bolinas, CA 94924	Research Biologist Ecology and behavior of seabirds. Past and/or present research experience with antarctic, arctic and temperate species. Present director of research for Farallon Island Station and director of PRBO (California) beached bird survey.
Gordon D. Alcorn Dept. of Biology University of Puget Sound Tacoma, WA 98416	Director of Graduate Studies and Professor of Biology. Taxonomy and nesting.
Daniel W. Anderson U.S. Fish and Wildlife Service P. O. Box C Davis, CA 95616	Wildlife Research Biologist Pelicans, Ospreys and other seabirds in the Gulf of California - ecology and pollutants.
Thomas Andres 6010 Lake Manor Drive Baltimore, MD 21210	Student Participated in bird counts along the Atlantic coast.
William D. Arvey P. O. Box 81526 College, AK 99701	Graduate Student Did a master's thesis in California on feeding ecology and head morphology of Brown and White Pelicans. Have general interest in Procellariiformes, Pelecaniformes and alcids in North Pacific - ecologically oriented.
Edgar P. Bailey U.S. Fish and Wildlife Service 813 D St. Anchorage, AK 99501	Wildlife Biologist Census and catalog breeding colonies and life history studies.
Alan Baldridge Hopkins Marine Station Pacific Grove, CA 93950	Librarian Distribution, abundance and ecology of North Pacific species.

Winston E. Banko U.S. Fish and Wildlife Service P. O. Box 35 Hawaii National Park, HI 96718	Wildlife Research Biologist Current research project on breeding status and distribution of Hawaiian race of Dark-rumped Petrel (Pterodroma phaeopygia sandwichensis) and Newell's race of Manx Shearwater (Puffinus puffinus newelli; formerly (1963-1965) a staff assistant to Philip Humphrey, Director of Pacific Ocean Biological Survey Program, Smithsonian Institution.
George A. Bartholomew Dept. of Zoology University of California Los Angeles, CA 90024	Professor Behavior and physiology.
James C. Bartonek U.S. Fish and Wildlife Service 1412 Airport Way Fairbanks, Alaska	Wildlife Research Biologist Life histories, ecological requirements, population dynamics and management of migratory birds, especially waterfowl and seabirds.
Richard Bauer P. O. Box 1027 Vallejo, CA 94590	Wildlife Biologist Cataloging and censusing nesting colonies. Effects of human disturbance upon nesting colonies.
James A. Baumhofer 1884 Berkeley Ave. St. Paul, MN 55105	Graduate Student Studies of breeding biology of Black Storm-Petrel and Least Storm-Petrel in Mexico. General census work off Mexico and California.
Jean Bédard Dept. de Biologie Faculté des Sciences Université Laval Québec 10, Québec Canada	Professor Several long-term studies with various members of the family Alcidae, both in the Atlantic and in the Pacific. Most recent interests: community ecology in northern Bering Sea marine birds and evolution and adaptive radiation in Alcidae.
Robert D. Bergman U.S. Fish and Wildlife Service 813 D Street Anchorage, AK 99501	Wildlife Biologist Working with J. Larry Haddock in censusing bird populations of Prince William Sound. Initiating an investigation of a salt marsh near Valdez, Prince William Sound.

Laurence C. Binford California Academy of Sciences Golden Gate Park San Francisco, CA 94118	Ornithologist Currently working on distribution and identification of Yellow-billed Loons in western U.S. President of the Board of Directors of Point Reyes Bird Observatory.
Ernest S. Booth Box 277 Anacortes, WA 98221	Film Producer Have made several motion pictures about seabirds, also filmstrips and sets of colored slides--birds of Galspagos, Midway Islands, Hawaii, as well as Pacific coastal area of U. S. Author of four bird guides.
James H. Branson Natl. Marine Fisheries Service Box 291 Kodiak, AK 99615	Enforcement Agent Observation and census of pelagic species. Spend 70 to 100 days a year at sea, usually more than three miles offshore.
Robert G. Bromley Dept. of Wildlife & Fisheries University of Alaska Fairbanks, AK 99701	Graduate Student Field study on the Canada Goose on the Copper River Delta.
R. G. B. Brown Canadian Wildlife Service Marine Ecology Laboratory Bedford Institute Dartmouth, Nova Scotia Canada	Wildlife Biologist Quantitative investigations of the pelagic ecology of seabirds off the Canadian Atlantic coast.
M. Ralph Browning Bird and Mammal Laboratories Natl. Museum of Natural History Washington, D. C. 20560	Ornithologist Distribution and behavior, especially as it relates to taxonomy. Worked on some of the offshore islands of the Oregon coast. Interested in preserving seabird breeding areas.
Charles Bruce Oregon State Game Commission P. O. Box 3503 Portland, OR 97208	Wildlife Ecologist - nongame species. Interested in the population status and distribution of seabird colonies along the Oregon coast.
Paul A. Buckley 74 Clarke Drive East Northport Long Island, NY 11731	Research Zoologist Ecological and behavioral adaptations, especially of terns. Nesting density and survey techniques for colonial seabirds.

John J. Burns
Alaska Dept. of Fish & Game
1300 College Rd.
Fairbanks, AK 99701

Marine Mammals Biologist

Marine productivity, nutrient cycling, energy transfer, ecological relationships with other marine organisms, species diversity, distribution and abundance - primarily Bering Sea.

J. Burton
4101 E. Sherbrooke St.
Montreal, Quebec
Canada

Research Assistant

Interested in the migration of shorebirds and bird hazards to aircraft.

Edward H. Burtt, Jr.
Dept. of Zoology
University of Wisconsin
Madison, WI 53706

Graduate Student

Phylogeny of the pecking response in gulls. Adaptations to cliff-nesting in the Black-legged Kittiwake.

John L. Butler
Natl. Marine Fisheries Serv.
Southwest Fisheries Center
P. O. Box 271
La Jolla, CA 92037

Biologist

Professional work with fisheries assessment and zoogeography of open ocean marine fishes. Interested in the trophic relations of marine birds and correlation of bird distribution with hydrography and productivity of the oceans.

G. Vernon Byrd
Aleutian Islands Natl.
Wildlife Refuge
Box 5251
Adak, AK 98791

Acting Refuge Manager

General survey of seabirds in the refuge. Conducting a beached bird survey on Adak. Especially interested in ecology of auklets.

R. Wayne Campbell
British Columbia Prov. Museum
Victoria, B. C.
Canada

Assistant Curator of Birds and Mammals

Ecology, colony censuses, migration and dispersal from colonies.

Michael Carins
P. O. Box 156
Civic Square
A. C. T. 2608
Australia

Electronics Technician

Secretary of Australian Seabird Group.

Charles T. Collins
Dept. of Biology
California State University,
Long Beach
Long Beach, CA 90840

Professor

Breeding biology and conservation of terns, especially California Least Tern. Breeding biology and banding studies of seabirds.

Robert M. Craig Arizona-Sonora Desert Museum P. O. Box 5607 Tuscon, AZ 85703	General Curator Interested in islands in the Gulf of California and Brown Pelican populations.
Christian Dau Dept. of Wildlife & Fisheries University of Alaska Fairbanks, AK 99701	Graduate Student Graduate work on eider ecology in western Alaska.
Lawrence R. DeWeese U.S. Fish and Wildlife Service P. O. Box C Davis, CA 95616	Wildlife Biologist Seabird ecology and populations
Jared M. Diamond Dept. of Physiology School of Medicine University of California, Los Angeles Los Angeles, CA 90024	Professor Ecology of landbird communities on islands. Interested in preserving island habitat.
Matthew Dick Marine Collections University Museum University of Alaska Fairbanks, AK 99701	Biologist Studied the breeding biology and behavior of the Pelagic Cormorant at Cape Peirce Alaska in 1970 and 1973. Interested in the breeding biology of cliff-nesting species.
George J. Divoky U.S. Fish and Wildlife Service 1412 Airport Way Fairbanks, AK 99701	Wildlife Research Biologist Past studies with pelagic distribution of birds in the Beaufort and Chukchi Seas. Currently compiling a catalog of Alaska seabird colonies. Interested in breeding biology of alcids.
Erica H. Dunn Museum of Zoology University of Michigan Ann Arbor, MI 48104	Graduate Student Ten year association with Massachusetts Audubon gull and tern projects. Doctoral research on the energy budget of nestling Double-crested Cormorants.
David I. Eisenhauer Dept. of Forestry and Conservation Purdue University West Lafayette, IN 47907	Graduate Research Assistant Currently finishing research on the ecology of the Emperor Goose in Alaska. Interested in all wildlife, but primary interest is waterfowl.

Bruce G. Elliott California Dept. of Fish and Game South Bay Wildlife Management Unit 485 Manzanita Felton, CA 95018	Wildlife Biologist An amateur ornithologist extremely interested in pelagic species. Teach biology of pelagic birds of California in community education program at local college.
William P. Elliott School of Oceanography Oregon State University Corvallis, OR 97331	Meteorologist and Physical Oceanographer Interested in meteorological and oceanographic factors influencing seabird distribution and time changes of this distribution.
Ben J. Fawver Life Sciences Division Southwestern Oregon Community College Coos Bay, OR 97420	Professor Populations - though all studies to present have been with land birds.
Francis H. Fay Arctic Health Research Center Fairbanks, AK 99701	Research Biologist Interested in assessment, productivity, trophic relations and comparative ecology of Bering Sea populations of marine mammals.
Clifford H. Fiscus Natl. Marine Fisheries Service Marine Mammal Division Sand Point, NSA Bldg. 192 Seattle, WA 98115	Wildlife Biologist Primarily interested in fur seals, seabird distribution and seabirds in relation to marine mammals. Planned work in Bering Sea will include some studies of seabird feeding and food habits in relation to fur seals.
Harvey I. Fisher Dept. of Zoology Southern Illinois University Carbondale, IL 62901	Professor Biology of the Laysan Albatross.
Daniel D. Gibson University Museum University of Alaska Fairbanks, AK 99701	Research Assistant Pelagic bird studies in North Atlantic and Caribbean Sea (1965-USNM), in Bering Sea (1969, 1970 - USFWS) and in Aleutian Islands (1971, 1972 - USFWS). Working on an updating of <u>Birds of Alaska</u>.

Wm. Humphrey Gillett P. O. Box 242 Andrews University Berrien Springs, MI 49104	Research Biologist Behavior of the Glaucous-winged Gull and related species. Behavioral analysis of the effects of overpopulation in gull colonies. Gull dispersal around airports. Life histories of seabirds in general.
Michael Gochfeld Dept. of Ornithology American Museum of Natural History Central Park West at 79th St. New York, NY 10024	Avian Ecologist Productivity and mortality of Common Tern and other Atlantic coast species. Growth and behavioral development of Black Skimmers. Effects of environmental contamination and human disturbance on colonial birds (New York, Argentina, Peru).
John S. Gottschalk Suite 301 1709 New York Ave. N.W. Washington, D.C. 20006	Executive Vice President of International Association of Game, Fish and Conservation Commissioners. Interested in arctic seabirds and the impact of oil pollution on them.
Carl Grauvogel Alaska Dept. of Fish and Game Box 862 Nome, AK 99762	Game Biologist Census of bird colonies on Sledge Island, Bering Sea. Interested in arrival dates of breeding seabird pairs, breeding behavior and biology.
Charles J. Guiget British Columbia Prov. Museum Victoria, B. C. Canada	Curator of Birds and Mammals Several publications on seabirds.
J. Larry Haddock U.S. Fish & Wildlife Service 813 D St. Anchorage, AK 99501	Wildlife Biologist Determine the numbers and reason for use of all birds utilizing Prince William Sound by species and season to estimate effects of oil transport operations.
David Hancock Wildlife Conservation Center 3215 Island View Rd. Saanichton, B.C. Canada	Biologist, Writer and Photographer General ecology, bioenergetics and conservation.

Henry A. Hansen U.S. Fish and Wildlife Service 813 D St. Anchorage, AK 99501	Wildlife Administrator General program administration.
Stanley W. Harris Dept. of Wildlife Management California State University, Humboldt Arcata, CA 95521	Professor Recently conducted research on nesting storm-petrels. Interested in seasonal distribution of pelagic birds.
Helen Hays Dept. of Ornithology American Museum of Natural History Central Park West at 79th St. New York, NY 10024	Chairman of Great Gull Island Committee Conducting study of Common and Roseate Terns on Great Gull Island at the eastern end of Long Island Sound. Monitoring colony for effects of environmental pollution.
Robert D. Hoffman The Ohio Cooperative Wildlife Research Unit 1735 Neil Ave. Columbus, OH 43210	Graduate Research Associate Ecological studies of breeding colonies. Flow of pollutants through marine food chains.
Wayne Hoffman c/o Natural History Museum Dept. of Zoology Oregon State University Corvallis, OR 97331	Student Migration of shorebirds, gulls and Procellariiformes.
Thomas E. Horobik 4000 4th Ave. N. Great Falls, MT 59401	Teacher Seabirds as marine pollution indicators.
Paul M. Howard Natl. Audubon Society 555 Audubon Place (Fulton near Fair Oaks) Sacramento, CA 95825	Western Regional Representative
George L. Hunt, Jr. Dept. of Population and Environmental Biology University of California, Irvine, Irvine, CA 92664	Professor Reproductive behavior and ecology of seabirds. Foraging behavior and ecology.

Michael John Imber Wildlife Service Dept. of Internal Affairs Wellington New Zealand	Ecologist Breeding biology, feeding ecology, distribution and migration of Procellariiformes, especially Pterodroma and Procellaria.
Lawrence Irving Institute of Arctic Biology University of Alaska Fairbanks, AK 99701	Advisory Scientific Director and Professor of Zoophysiology. Geographical distribution, migration and metabolism.
M. E. (Pete) Isleib Box 424 Cordova, AK 99574	Field Ornithologist and Commercial Fisherman. Main interests include birds of Alaska and North Pacific, specifically the status, distribution and abundance of pelagic and coastal species in the Gulf of Alaska and adjacent land areas. Breeding biology and life history data on the alcids that utilize these areas, specifically the Marbled Murrelet.
Joseph R. Jehl, Jr. Natural History Museum P. O. Box 1390 San Diego, CA 92112	Biologist Distribution, ecology and evolution.
Oscar W. Johnson Dept. of Biology Moorhead State College Moorhead, Minnesota 56560	Professor Major interests relate to shorebirds using the Pacific Basin for migration, wintering, etc.
Stephen R. Johnson Dept. of Zoology University of British Columbia Vancouver, B.C. Canada	Ornithologist Ecology and physiology.
James O. Keith U.S. Fish and Wildlife Service Denver Wildlife Research Center Bldg. 16, Federal Center Denver, CO 80225	Wildlife Research Biologist Natural regulation of seabird abundance. Effects of pollution on seabird populations. Ecology of seabirds.
James G. King U.S. Fish and Wildlife Service P. O. Box 1287 Juneau, AK 99801	Waterfowl Biologist Population studies and conservation.

Warren B. King Division of Birds Natural History Bldg. Smithsonian Institution Washington, D. C. 20560	Biologist Tropical Pacific seabirds
Fred C. Kinský c/o National Museum Private Bag Wellington New Zealand	Ornithologist Distribution, movements (migration and dispersal), and taxonomy.
Ralph D. Kirkpatrick Biology Dept. Ball State University Muncie, IN 43706	Professor Distribution, abundance, and ecology of seabirds in the Central Pacific.
C. Eugene Knoder Natl. Audubon Society 9250 West Fifth Ave. Lakewood, CO 80226	Research Specialist Population ecology and conservation, especially in relation to marine pollution.
G. L. Kooyman Physiological Research Laboratory Scripps Institute of Oceanography La Jolla, CA 92037	Zoologist Behavior and physiology of diving.
Ernie Kuyt Canadian Wildlife Service Box 508 Fort Smith, N.W.T. Canada	Biologist Census techniques and survey methods.
Lora Lynn Leschner College of Forest Resources University of Washington Seattle, WA 98195	Graduate Student Studying the Rhinoceros Auklet in Washington for a master's degree.
Ron LeValley Dept. of Biology California State University Humboldt Arcata, CA 95521	Graduate Student Taxonomy, especially the genus Larus, and distribution, especially off northern California coast. Presently working on master's degree and studying Yellow-footed Western Gull of Gulf of California (Larus occidentalis livens).
David B. Lewis Moss Landing Marine Laboratories Box 223-(ML) Moss Landing, CA 95039	Graduate Student Larid populations, dispersion and breeding. Local seabird distribution and migration.

Cuthbert M. Love Natl. Marine Fisheries Service Southwest Fisheries Center P. O. Box 271 La Jolla, CA 92037	Oceanographer A general interest in behavior and distribution.
Richard MacIntosh General Delivery Homer, AK 99603	Fisheries Technician Make pelagic observations while aboard oceanographic and fishing vessels.
Bruce L. Manion 2251 Summer St. Berkeley, CA 94709	Graduate Student Nocturnal orientation of Ashy Storm-Petrel and Cassin's Auklet on and about Southeast Farallon Island.
David A. Manuwal College of Forest Resources University of Washington Seattle, WA 98195	Professor Population ecology of Cassin's Auklet. Population structure and reproductive cycles of alcids.
Patrick W. Martin P. O. Box 37 Telkwa, B.C. V0J 2X0	Commercial Fisherman and Biological Consultant General interest in distribution, numbers, timing of migration and habits of pelagic birds.
Bruce R. Mate Environmental Health Science Center Oregon State University Corvallis, OR 97331	Research Biologist and Teacher Environmental toxicants in marine food chains and respiratory physiology.
R. Guy McCaskie 1310 14th St. Imperial Beach, CA 92032	Contract Manager Status and distribution of pelagic birds off California and neighboring areas of the Pacific Ocean.
Jacqueline McEnroe Hayfields Sunset Trail Clinton Corners, NY 12514	Graduate Student Growth studies of Leach's Storm-Petrel. Generally interested in reproductive strategies of Procellariiformes and sulids.

L. Richard Mewaldt Avian Biology Laboratory California State University, San Jose San Jose, CA 95192	Professor Member of board and past president of Point Reyes Bird Observatory. Special interest in Cassin's Auklet, Western Gull, Common Murre, Ashy Storm-Petrel. General interest in pelagic and estuarine birds of the northeast Pacific.
Peter G. Mickelson Box 280 Cordova, AK 99574	Wildlife Biologist Censusing colonies and conducting beached bird surveys.
E. H. Miller Dept. of Wildlife and Fisheries University of Alaska Fairbanks, AK 99701	Graduate Student Ecology, behavior, evolution and genetics.
M. D. Murray C.S.I.R.O. McMaster Laboratory Private Bag No. 1 Glebe NSW 2037 Australia	Research Scientist Ecological adaptations and population regulation. Chairman, Subcommittee on Avian Biology of the Scientific Committee for Antarctic Research.
M. T. Myres Dept. of Biology University of Calgary Calgary, Alberta T2N 1N4 Canada	Professor Changes from the established (but unpublished) baseline of numbers of seabirds of each pelagic species at Ocean Station "Papa" (50^{o}N, 145^{o}W), at each season of the year. Program continuing. Seabird migration along the outer coast of British Columbia.
R. Wayne Nelson Dept. of Biology University of Calgary Calgary, Alberta T2N 1N4 Canada	Graduate Student Studying Peregrine Falcons on the Queen Charlotte Islands and the effect of biocides on falcon and alcid populations.
David N. Nettleship Canadian Wildlife Service 2721 Highway 31 Ottawa, Ontario K1A 0W1 Canada	Research Scientist Direct CWS program "Studies on Northern Seabirds"

Haruo Ogi Research Institute of North Pacific Fisheries Hokkaido University Hakodate, Hokkaido Japan	Graduate Student Stomach contents analysis of the murres in the North Pacific and Bering Seas. Mortality of seabirds by the Japanese salmon fisheries.
Robert T. Orr California Academy of Sciences Golden Gate Park San Francisco, CA 94118	Associate Director Interested in seabirds inhabiting islands in the Gulf of California.
Samuel M. Patten, Jr. College of Forest Resources University of Washington Seattle, WA 98195	Graduate Student and Research Assistant Sympatry and interbreeding of Herring and Glaucous-winged Gulls in southeastern Alaska. Breeding ecology of the Black-legged Kittiwake and other colonial seabirds in Glacier Bay National Monument, Alaska.
Dennis R. Paulson Dept. of Zoology University of Washington Seattle, WA 98195	Professor A general interest in seabird distribution and biology.
Robert Payne Museum of Zoology University of Michigan Ann Arbor, MI 48104	Ornithologist Have done studies of molting and breeding schedules of some alcids.
William G. Pearcy School of Oceanography Oregon State University Corvallis, OR 97331	Biological Oceanographer Ecology of oceanic animals.
Richard H. Pough 33 Highbrook Ave. Pelham, N. Y. 10803	Conservationist Protection of key breeding areas. Ecology of the alcids of the North Pacific.
Frank A. Pitelka Museum of Vertebrate Zoology University of California Berkeley, CA 94720	Professor Comparative ecology of breeding and wintering populations of shorebirds.
Frank Richardson Dept. of Zoology University of Washington Seattle, WA 98105	Professor Working with Hawaiian seabirds. Also working on the Rhinoceros Auklet in Washington and migration and distribution on the Washington and British Columbia coast.

Carroll Rieck Dept. of Game 600 N. Capitol Way Olympia, WA 98504	Nongame Supervisor All Washington nongame species.
Robert W. Risebrough 142 Vicente Rd. Berkeley, CA 94705	Biologist Effects of pollutants (organochlorine compounds, heavy metals and petroleum) on bird populations.
Ian Robertson 4525 West 9th Ave. Vancouver, B. C. V6R 2E2 Canada	Ornithologist Currently working on one year's data on seabirds of the British Columbia coast. Previously studied breeding biology and feeding ecology of fish-eating birds.
Gerald A. Sanger Natl. Marine Fisheries Service Marine Mammal Division Sand Point, NSA Bldg. 192 Seattle, WA 98115	Biological Oceanographer Pelagic zoogeography and ecology of North Pacific seabirds. The role of birds in pelagic food webs. Currently estimating the seabird kill by the western North Pacific salmon driftnet fishery.
Ralph W. Schreiber Dept. of Biology University of South Florida Tampa, FL 33620	Graduate Student Populations, effects of pollution and growth and development of nestlings of tropical seabirds.
James Michael (Mike) Scott Dept. of Fisheries and Wildlife Oregon State University Corvallis, OR 97331	Graduate Student Community organization, energetics, distribution, abundance and behavior of marine birds in an ecological context.
Spencer G. Sealy Dept. of Zoology University of Manitoba Winnipeg, Manitoba R3T, 2N2 Canada	Professor Distribution, breeding ecology and feeding ecology of alcids.
Palmer C. Sekora 337 Uluniu St. Kailua, Oahu HI 96734	Biologist Leader of Aleutian Islands Refuge wilderness field study. Census of pelagic bird resources in the refuge. Currently compiling data for publication.

William M. Shields Dept. of Biology Livingston College New Brunswick, NJ 08903	Graduate Student Working on the distribution, numbers, and ecology of seabirds of the coast of New York and New Jersey.
John L. Sincock U.S. Fish and Wildlife Service R. R. 1, Box 11 Koloa, Kauai, HI 96756	Research Biologist Breeding biology of Newell's Manx Shearwater. Seabird counts on Hawaiian Islands.
John Smail Point Reyes Bird Observatory Box 321 Bolinas, CA 94924	Executive Director, PRBO
LeRoy W. Sowl U.S. Fish and Wildlife Service 813 D St. Anchorage, AK 99501	Biologist Seasonal distribution and abundance of marine birds in the Gulf of Alaska and Prince William Sound. Censusing of breeding colonies in Gulf of Alaska. Life history of Marbled Murrelet.
Steven Speich Dept. of Biological Sciences University of Arizona Tuscon, AZ 85721	Graduate Student Population structure and molt of Cassin's Auklet.
Paul F. Springer U.S. Fish and Wildlife Service California State University, Humboldt Arcata, CA 95521	Wildlife Research Biologist Research on ecological relationships, distribution and abundance of birds of coastal bays and estuaries.
Sam W. Stoker Institute of Marine Science University of Alaska Fairbanks, AK 99701	Biological Oceanographer Marine ecology.
John F. Stout Biology Dept. Andrews University Berrien Springs, MI 49104	Professor Research on behavior and dispersal of several species of gulls.
Carl A. Strang Dept. of Forestry and Conservation Purdue University West Lafayette, IN 47907	Graduate Student Study of the Glaucous Gull in western Alaska; its behavior, ecology and hybridization with the Glaucous-winged Gull.

Gregory P. Streveler Glacier Bay Natl. Monument Gustavus, AK 99826	Research Biologist Interested in the seabirds and the environmental quality within Glacier Bay National Monument.
Ken Summers 1022 50th St. Delta, B. C. Canada	Seabirds Technician, Canadian Wildlife Service. Censusing of colonies and migrants.
Max C. Thompson Dept. of Biology Southwestern College Winfield, KS 67156	Professor Studied seabirds on Pribilof Islands for five years for Smithsonian Institution. Also have spent some time on the Aleutian Islands.
Asa C. Thoreson Box 147 Andrews University Berrien Springs, MI 49104	Chairman, Biology Dept. Alcids, petrels, and diving petrels.
William Threlfall Biology Dept. Memorial University St. John's, Nfld. Canada	Professor Breeding biology, ecology and movements. Parasites and diseases.
Daniel Timm Alaska Dept. of Fish and Game 333 Raspberry Rd. Anchorage, AK 99501	Wildlife Biologist Initiation of a centralized seabird colony location file for Alaska.
John P. Tramontano Orange County Community College 115 South St. Middletown, NY 10940	Biology Instructor Food niche, behavior and zoogeographic distribution.
M. D. F. Udvardy Dept. of Biological Sciences California State University, Sacramento Sacramento, CA 95819	Professor Zoogeography, ecology, etc. of Pacific alcids, 1962 to present. Guided research of students on ecology and behavior of pelecaniformes (van Tets), gulls (Vermeer), alcids (Drent, Bédard, Sealy, Speich).
Peggy VanRyzin Dept. of Zoology Southern Illinois University Carbondale, IL 62901	Graduate Student Worked on Midway Is. (Nov. 1972 - Jan. 1973) studying the effects of age and experience of the mate on the age of breeding initiation in the Laysan Albatross. Interested in breeding biology and longevity.

Gus VanVliet Bird Division Museum of Zoology University of Michigan Ann Arborn, MI 48104	Graduate Student Life histories, breeding biology, feeding ecology, population dynamics and thermoregulation of alcids.
Robert L. (Rex) Van Wormer U.S. Fish and Wildlife Service Willapa Natl. Wildlife Refuge Ilwaco, WA 98624	Wildlife Biologist Breeding biology, distribution, foods and feeding habits, pesticide analysis, research methodology.
Kees Vermeer 1110-10025 Jasper Ave. Edmonton, Alberta T5J 1S6 Canada	Research Biologist Inventories, surveys, techniques, distribution, density, species composition, breeding biology, population dynamics and food habits.
Bernardo Villa-Ramírez Lab. de Mastozoologia Apartado Postal 70-233 Mexico 20 D. F. Mexico	Biologist Seabirds in the Gulf of California
Carel M. Vooren Fisheries Research Division P. O. Box 19062 Wellington New Zealand	Fisheries Biologist Distribution and behavior of birds at sea.
Terence R. Wahl 3041 Eldridge Bellingham, WA 98225	Business - retailing Banding program - distribution etc. of Glaucous-winged Gull. Pelagic bird observations - conduct birding trips at sea.
Michael P. Walters Dept. of Ornithology British Museum (Natural History) Tring, Herts England	Assistant Curator of the egg collection Particularly interested in alcids and Procellariiformes.
John G. Ward Dept. of Zoology University of British Columbia Vancouver, B. C. Canada	Graduate Student Population and feeding biology. Censusing techniques.

John Warham Zoology Dept. University of Canterbury Christchurch New Zealand	Senior Lecturer General biology and behavior of penguins and petrels.
George E. Watson Division of Birds Natl. Museum of Natural History Smithsonian Institution Washington, D. C. 20560	Curator and Research Scientist Systematics, distribution and ecology.
George C. West Institute of Arctic Biology University of Alaska Fairbanks, AK 99701	Professor Completed study with S. R. Johnson on metabolism, thermoregulation, growth and development of Thick-billed and Common Murres. Past work with fatty acids of Adelie Penguin blubber from breeding season at Cape Crozier.
John A. Wiens Dept. of Zoology Oregon State University Corvallis, OR 97331	Professor and Ecologist Population dynamics and species relationships among coastal Larus. Trophic dynamics and energy allocation patterns in marine communities.
Howard M. Wight Dept. of Fisheries and Wildlife Oregon State University Corvallis, OR 97331	Leader, Oregon Cooperative Wildlife Research Unit General ecology and population dynamics.
Kent Wohl Alaska Outer Continental Shelf Office P. O. Box 1159 Anchorage, AK 99510	Wildlife Biologist Coastal and pelagic birds of the continental shelf.
Marina Wong 10 Hillside Ave. New York, N. Y. 10040	Graduate Student Spent two summers observing the Black Guillemot in the Bay of Fundy. Assisted in banding Leach's Storm-Petrels and Greater and Sooty Shearwaters.
Charles F. Yocom School of Natural Resources California State University, Humboldt Arcata, CA 95521	Professor Several publications on seabirds

Henry J. Yuen 2-1/2 Mi. Chena Hot Springs Rd Fairbanks, AK 99701	Graduate Student Breeding biology of Fairy Tern Social facilitation in Herring Gull chicks.
C. Fred Zeillemaker William L. Finley Natl. Wildlife Refuge Route 2, Box 208 Corvallis, OR 97330	Wildlife Management Biologist Monitoring seabird nesting populations of Oregon Islands National Wildlife Refuge.

Additions

Robert L. DeLong 1732 Hearst Berkeley, CA 94703	Wildlife Biologist and Student Breeding status of alcids and procellarids on Channel Islands and islands of Pacific Baja California. Pelagic distribution of seabirds in southern California waters.
Richard E. Fitzner Zoology Dept. Washington State University Pullman, WA 99163z	Ecosystems Scientist Battele Northwest Laboratories Proposed doctoral research will assess the impact of pollutants on seabird populations. Nesting behavior and activity will also be studied.
Jerry L. Hout U.S. Fish & Wildlife Service Box 346 Bethel, AK 99559	Refuge Manager Professional interest in preserving seabird habitat. Personal interest in photographing seabirds.
Gale Monson 8831 N. Riviera Dr. Tuscon, AZ 85704	Resident Director, Arizona-Sonora Desert Museum Interested in the distribution of seabirds in the Gulf of California.
Harvey K. Nelson U.S. Fish and Wildlife Service Wildlife Research Center Jamestown, N. D. 58401	Research Administrator Research planning and program coordination. Ecological requirements, population dynamics and management of migratory birds.

Timothy O. Osborne Box 12 Monze Zambia	Wildlife Biologist Master's thesis on the ecology and avian use of the coastal rocks of northern California.
Clayton M. White Dept. of Zoology Brigham Young University Provo, UT 84602	Professor Stability and species composition of mixed species cormorant colonies. Auklet and murrelet distribution in relation to major predators.

PACIFIC SEABIRD GROUP

DEDICATED TO THE STUDY AND CONSERVATION OF PACIFIC SEABIRDS AND THEIR ENVIRONMENT

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1974

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M. D. F. Udvardy, Dept of Biological Sciences, California State University, Sacramento, CA 98519